Forecasting Property Performance

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CRC Construction Innovation

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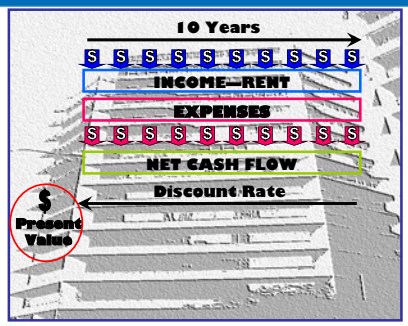
BUILDING OUR FUTURE

Topics for Discussion

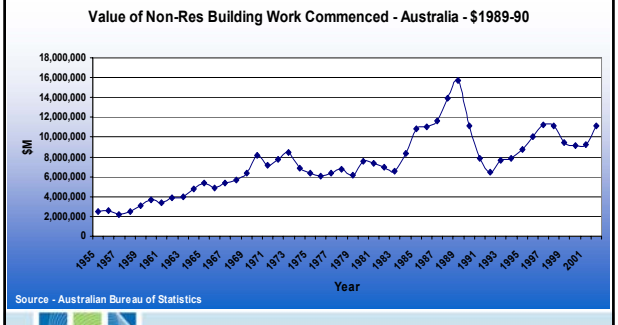
- Viability and valuation
- Commercial property market volatility
- Office rent and construction activity determinants
- Forecasting office rents and space supply
- Valuation implications
- New research

VIABILITY

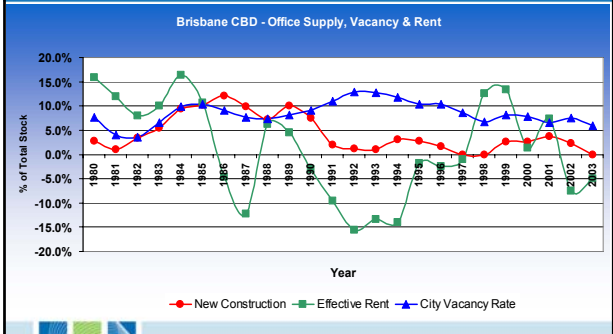
DCF Valuation Method



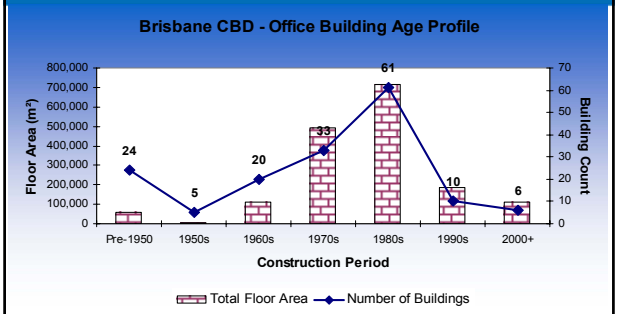
Historical Australian Construction Activity



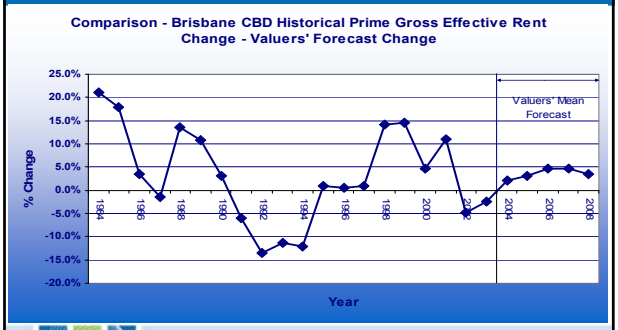
Research – Office Property Market Forecasts



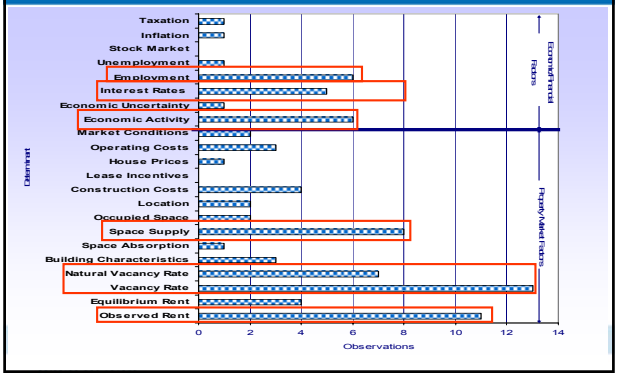
Brisbane CBD – Office Building Age Profile



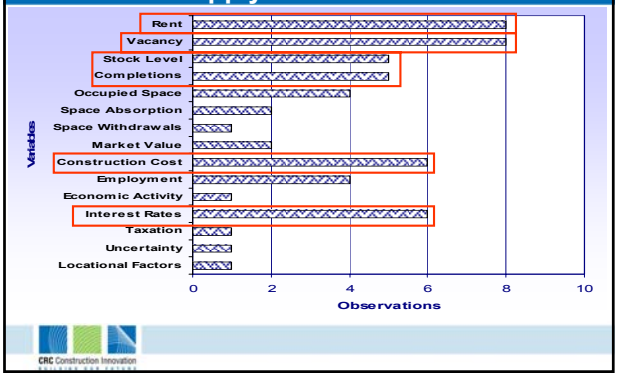
Brisbane CBD Office Rents – Historical and Valuers' Forecasts



Previous Research – Rent Determinants



Previous Research – New Office Space Supply Determinants



Market Rent Equation – Brisbane CBD

$$R_t = \beta_0 + \beta_1 R_{t-1} + \beta_2 V_{t-2} + \beta_3 SU_{t-2} + \beta_4 AB_t + \beta_5 I_t + \varepsilon$$

Where:

R = Prime Effective Gross Rent Rate (CPI Adjusted)

V = Vacancy Rate as % of Total Stock

SU = New Office Supply as % of Total Stock

AB = Net Space Absorption in m²

I = Commonwealth 10 Year Bond Rate (Annual Average)

Office Space Supply Equation – Brisbane CBD

$$C_t = \beta_0 + \beta_1 \Delta R_{t-2} + \beta_2 V_{t-4} + \beta_3 Y_{t-2} + \varepsilon_t$$

Where:

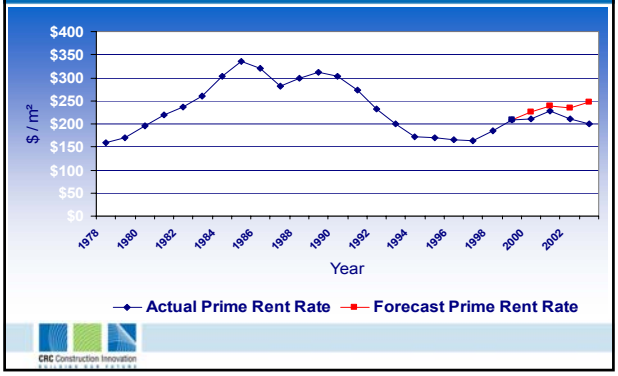
C = Office Completions in m² as a % of stock

ΔR = % Change in Prime Effective Office Rent Rate

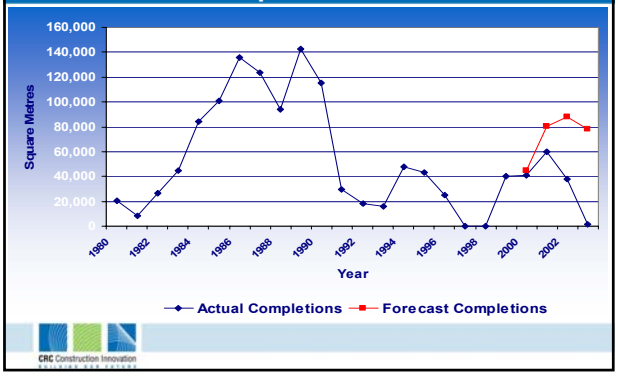
V = Office Vacancy Rate as a % of Total Stock

Y = Office Buildings Net Yields

Brisbane CBD Office Rent Out-of-Sample Forecast



Brisbane CBD Space Supply – Out-of-Sample Forecast



Sample Buildings – Brisbane CBD

111 George Street

1994

Education House

1986

Mineral House

1979

Primary Industries Building

1969

Rent Forecast Sensitivity

Building	CBRE Valuation	Valuation Using Model Generated Forecast	% Variation	Valuation Using Mean Valuers' Forecast	% Variation
111 George Street	$103M	$98.5M	-4.4%	$106.5M	+3.4%
Education House	$66M	$60M	-9.1%	$65.5M	-0.8%
Mineral House	$77M	$74.5M	-3.2%	$81.25M	+5.5%
Primary Industries	$29M	$25M	-13.8%	$27.5M	-5.2%

Value / Rent Mapping

Conclusions

- Industry inconsistencies exist in property market forecasts
- International research provided guidance on key office rent and construction activity determinants
- Pure mathematical models found to over-predict in local circumstances
- Varying forecasts found to have material impact on property assessments
- Further research avenues identified

Questions?